

REMARKS

These remarks and the accompanying amendments are responsive to the Office Action dated August 22, 2006 (hereinafter referred to as the "Office Action"). At the time of the last examination, Claims 2-10, 13, 16-19, 21 and 28-37 were pending. The Office Action did not address Claims 34-37, allowed Claims 2-10, 13 and 28-30, and rejected Claims 16-19, 21 and 31-33. By this paper, Claims 16, 18, 21 and 31-33 are amended. No claims are added or cancelled. Accordingly, upon entry of this amendment, Claims 2-10, 13, 16-19, 21 and 28-37 will be pending for further consideration.

Section 2 of the Office Action rejected Claims 16-19, 21 and 31-33 under 35 U.S.C. 112, second paragraph, as being indefinite. The applicants respectfully traverse as the rejected claims accurately and definitely claim the subject matter of the invention, and are not indefinite. Particularly, it is clear from the language of the rejected claims that signals that are transmitted in the FDD transmission step or with the FDD transmission means are based on the FDD method, while signals that are transmitted in the TDD transmission step or with the TDD transmission means are based on the TDD method. Nevertheless in order to clarify the language of the claims, each of the independent rejected claims 16, 18, 21 and 31-33 are amended. These amendments are made for reasons unrelated to the patentability of the claims, as the applicants believe the claims to be definite even without the amendments.

Section 4 of the Office Action rejects Claims 16-19, 31 and 32 under 35 U.S.C. 103(a) as being unpatentable over German patent number DE 19830841 A1 to Shulz (hereinafter, "Shulz") in view of United States patent number 6,882,727 issued to Vialen et al. (hereinafter, "Vialen") and further in view of United States patent number 6,351,458 issued to Miya (hereinafter, "Miya").

As previously mentioned, even if a synchronization channel and a common control channel are transmitted in Schulz in consideration of Hwang, it is not necessary to include information of the synchronization channel based on the TDD method in a signal based on the FDD method and transmit the signal. Also, it is not necessary to include information of the common control channel based on the TDD method in a signal based on the FDD method and transmit the signal.

That is, in Schulz, the base station BS transmits organization information oi1, oi2, etc. including several radio interfaces FS1 (FDD mode in Figure 3), FS2 (TDD mode in Figure 3), etc. through the first radio interface FS1 (please see Figures 1-4, claims 1, 8 and 11, etc. of Schulz). This means that the base station BS includes information of a communication channel based on the TDD method in a signal based on the FDD method and transmits the signal. Therefore, it is not necessary to include information of the synchronization channel and/or the common control channel based on the TDD method in a signal based on the FDD method and transmit the signal. Therefore, there is not teaching or suggestion of the same in the cited art. Thus, it is not obvious for one skilled in the art to include information of the synchronization channel and/or the common control channel based on the TDD method in a signal based on the FDD method and transmit the signal.

In contrast, when the transmission recited in Claims 16 and 31 is made, even if the receiving side does not know information regarding a communication channel based on the TDD method, the receiving side can use information of a synchronization channel based on the TDD method included in a signal based on the FDD method to receive the synchronization channel, use the received synchronization channel to identify a code of a common control channel based on the TDD method, use the identified code to receive the common control channel, acquire

information of a communication channel based on the TDD method from the received common control channel, and use the acquired information to receive the communication channel.

Further, when the transmission recited in Claims 18 and 32 is made, even if the receiving side does not know information regarding a communication channel based on the TDD method, the receiving side can use information of a common control channel based on the TDD method included in a signal based on the FDD method to receive the common control channel, acquire information of a communication channel based on the TDD method from the received common control channel, and use the acquired information to receive the communication channel.

The Office Action rightfully acknowledges that Shulz fails to disclose "the signal based on the TTD method includes a signal of a communication channel and both or one or a signal of a synchronization channel, which identifies a code of the common control channel and a single of a common control channel, which includes the information of the common control channel. However, the Office Action then alleges that Miya teaches this feature.

First of all, it is the information of the synchronization channel signal, not the synchronization channel signal (or the pilot channel signal) itself, that the signal based on the FOO method according to claims 16 and 31 includes. As clearly described in column 13, lines 22-28, the Miya patent discloses pilot channel signals, the control channel signals, and the communication channel signals outputted in the FDD band. There is, however, no indication or suggestion in the Miya patent that the FOO band includes information of the synchronization channel signal or the pilot channel signals.

Similarly, the FOO band of the Miya patent includes the common channels signals, but not" information of the common control channel. Again, this is contrary to the requirements of claims 18 and 32.

Furthermore, while claims 16, 18, and 31-32 require that the signal based on the TOO method include a signal of common control channel among other signals, column 13, lines 33-32 of the Miya patent clearly indicates that the control channel signals are not outputted in the TOO band. Clearly, this is contrary to the requirements of claims 16, 18, and 31-32 of the present application. Furthermore, since the control channel signals are common to both of the FOO band and the TOO band in the Miya patent (see column 13, lines 25-26), there is no need for the FDO band to include information of the control channel signal of the TOO band. Thus, the Miya patent does not suggest including such information in the FOO band either.

Therefore, Claims 16, 18, 31 and 32 are not obvious over Schulz, Hwang, and Miya, either singly or in combination. Claims 17 and 19 depend from Claims 16 and 18, respectively, and are thus not unpatentable over these references for at least the reasons provided for their respective independent claim. Accordingly, the 35 U.S.C. 103(a) rejection of Claims 16-19, 31 and 32 should be withdrawn, and withdrawal is respectfully requested.

Section 3 of the Office Action rejects Claims 21 and 33 under 35 U.S.C. 103 as being unpatentable over Shulz in view of United States patent application serial number 6,839,333 issued to Akerberg (hereinafter "Akerberg") and further in view of Maya.

Although Akerberg employs TDD and FDD, neither "signal based on TDD method" nor "signal based on FDD method" exists in Akerberg. That is, for example, FTX and FRX of Figure 4 mean a transmission signal and a receiving signal, respectively. It does not mean that one of FTX and FRX is "signal based on TDD method" and the other is "signal based on FDD method". The same thing can be said for the other figures (Figures 3 and 5-9).

Since neither "signal based on TDD method" nor "signal based on FDD method" exists in Akerberg, it is clear that Akerberg does not disclose "a timing offset between a signal based on a TDD method and a signal based on an FDD method". Therefore, it cannot be said that the

present invention of Claims 21 and 33 is obvious over Schulz and Akerberg. The Office Action acknowledges such stating that Shulz in view of Akerberg fail to expressly disclose a signal based on a TDD method or a signal based on an FDD method.

Regarding claims 21 and 33, they specifically require that the signal based on the FDD method include either the information relating to the communication channel signal's position within the signal based on the TDD method, or the information relating to a timing offset between the signal based on the TDD method and the signal based on the FDD method. There is no description in the Miya patent that the FDD band outputs such information. Furthermore, since the FDD band and the TDD band of the Miya patent both include the pilot channel signals, there is no need for the FDD band to have such additional timing-related information. Thus, the Miya patent does not suggest including such information in the FDD band either.

Thus, the 35 U.S.C. 103(a) rejection of Claims 21 and 33 should be withdrawn. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney.

Dated this 21st day of November, 2006.

Respectfully submitted,

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